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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/049,304	03/27/1998	SAVERIO CARL FALCO	BB-1037-F	5349

7590 07/29/2003

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WILMINGTON, DE 19898

EXAMINER

MCELWAIN, ELIZABETH F

ART UNIT	PAPER NUMBER
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1638

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DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/049,304

Applicant(s)

FALCO ET AL.

Examiner

Elizabeth F. McElwain

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 4-20 is/are pending in the application.
- 4a) Of the above claim(s) 8-10, 12 and 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-7, 11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

The amendments filed December 17, 2002 and May 6, 2003 have been entered.

Claims 1-3 have been cancelled.

Claims 4-7, 11, and 14 have been amended.

Claims 4-20 are pending.

5           This application contains claims 8, 10 and 16-20 drawn to an invention nonelected with traverse in Paper No. 18. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01. In addition, claims 9 and 12 are drawn to an invention non-elected by original presentation and must also be cancelled in response to the final rejection.

10           Claims 4-7, 11 and 13-15 are examined.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 6 is objected to for the recitation of "increase" which should read "increased".

15           Claims 7, and claims 11 and 13-15 dependent thereon, are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

20           Claim 7 is indefinite in the recitation of "or a part" with regard to the nucleic acid sequence, since a part can be as little as one nucleotide.

Claims 4, 6, 7, 11 and 13-15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, as stated in the last office action. In addition, a  
5 nucleic acid fragment that would hybridize under the claimed conditions and would increase lysine content is not described structurally or with any specific function. Any protein comprising a lysine residue could, potentially, increase lysine content in a plant cell.

Applicants' arguments filed December 17, 2002 have been fully considered but they are  
10 not persuasive. Applicants assert that the rejection should be withdrawn given that the specification discloses that the claimed sequences are partial sequences of corn LKR/SDH. In addition, applicants have submitted Epelbaum et al that is a reference by the inventors that discloses an Arabidopsis LKR/SDH sequence. Applicants have also submitted Kemper et al that assesses the structure/function of corn LKR/SDH, but does not provide a nucleotide or amino  
15 acid sequence. Applicants argue that a correlation between structure and function has been provided.

The Examiner maintains that applicants' arguments do not relate to the claims, which are drawn to SEQ ID NO: 120 and 122. Applicants have not made a correlation between the teachings of the cited references and claimed sequences.

Claims 4-7, 11 and 13-15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, as stated in the last office action.

5

Applicants' arguments and the Declaration of Falco filed December 17, 2002 have been fully considered but they are not persuasive. Applicants assert that the rejection should be withdrawn given that Tang et al teach an Arabidopsis cDNA encoding a bifunctional LKR/SDH, and state that SEQ ID NO: 111 is identical to the sequence taught by Tang et al. In addition, applicants argue that the Declaration of Falco demonstrates knocking out LKR/SDH leads to increased lysine accumulation, and a second declaration dated February 16, 2001 demonstrates seeds with increased lysine obtained from plants co-transformed with DHPS and LKR. Therefore, applicants argue that a correlation between sequence similarity and functionality has been established with regard to LKR/SDH.

10

The Examiner maintains that applicants' arguments do not relate to the claims, which are drawn to SEQ ID NO: 120 and 122. Applicants have not made a correlation between the teachings of the cited reference or the Declarations of Falco and claimed sequences.

15

No claims are allowed.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

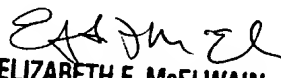
A shortened statutory period for reply to this final action is set to expire **THREE**  
5 MONTHS from the mailing date of this action. In the event a first reply is filed within **TWO**  
MONTHS of the mailing date of this final action and the advisory action is not mailed until after  
the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period  
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR  
1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,  
10 will the statutory period for reply expire later than **SIX MONTHS** from the date of this final  
action.

Any inquiry concerning this communication or earlier communications from the examiner  
15 should be directed to Elizabeth F. McElwain whose telephone number is (703) 308-1794. The  
examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,  
Amy Nelson, can be reached at (703) 306-3218. The fax phone number for this Group is (703)  
20 308-4242. The faxing of such papers must conform with the notice published in the Official  
Gazette, 1096 OG 30 (November 15, 1989).

Any inquiry of a general nature or relating to the status of this application should be  
directed to the legal analyst, Gwendolyn Payne, whose telephone number is (703) 305-2475, or to  
the Group receptionist whose telephone number is (703) 308-0196.

25 Elizabeth F. McElwain, Ph.D.  
July 25, 2003

  
ELIZABETH F. McELWAIN  
PRIMARY EXAMINER  
GROUP 1600